

In the Claims:

Please amend the Claims of this Application as set forth below.

1. (Previously Presented) An image encoding device having:

means of image encoding which encodes images in accordance with an irreversible compression method capable of processing input images in small region units,

means of image decoding which decodes encoded data created with the means of encoding,

means of characteristic pixel extraction which utilizes input images and decoded images obtained by the means of image decoding to extract characteristic pixels,

means of calculating characteristic distortion which utilizes characteristic pixels to calculate characteristic distortion of the decoded images in relation to the input images, and

means of parameter value control which controls parameter values determining the extent of data compression in the means of image encoding in accordance with the magnitude of characteristic distortion.

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12. (Previously Presented) The image encoding device according to Claim 1, wherein the means of calculating characteristic distortion calculates the magnitude of the characteristic distortion based on a difference between differences between individual pixel values corresponding to the characteristic pixels of the input image and the decoded image, and an average of the differences between individual pixel values.

13. (Previously Presented) The image encoding device according to Claim 1, wherein the means of calculating the characteristic distortion calculates variations in the differences between the pixel values of the characteristic pixels of the input image and the decoded image.

14. (Previously Presented) The image encoding device according to Claim 1, wherein the means of calculating the characteristic distortion calculates the characteristic distortion based on a value of the dispersion of differences between the pixel values of some of the pixels of the input image and the decoded image by small regions.

15. (Previously Presented) An image encoding device according to Claim 1, wherein the means of calculating characteristic distortion calculates the dispersion of differences between pixel values corresponding to the characteristic pixel of the input images and decoded images by small regions, taking the maximum value thereof as the size of the characteristic distortion.

16. (Previously Presented) An image encoding device according to Claim 1, wherein the means of calculating characteristic distortion calculates the differences between pixel values corresponding to the input images and decoded images together with the sum of the difference between those differences and the average by small regions, taking the maximum value thereof as the size of the characteristic distortion.
17. (Previously Presented) The image encoding device according to Claim 1, wherein the means of characteristic pixel extraction performs the extraction by classifying at least some of the pixels of the input images and at least some of the pixels of the decoded images.
18. (Previously Presented) The image encoding device according to Claim 17, wherein the means of calculating the characteristic distortion calculates the magnitude of characteristic distortion for each of the classifications classified by the means of characteristic pixel extraction.
19. (Previously Presented) The image encoding device according to Claim 18, wherein the means of parameter value control determines the extent of data compression by setting a threshold value of the magnitude of distortion for each of the classifications.

20. (Previously Presented) An image encoding device according to any one of Claims 1, 12, 13, 14, 15 or 16, wherein the small regions are blocks, the means of extracting characteristic pixels comprises a means of extracting characteristic blocks which utilizes the decoded and input images in order to extract characteristic blocks, the characteristic pixels being extracted from within the characteristic blocks.
21. (Previously Presented) An image encoding device according to Claim 20, wherein the means of extracting characteristic blocks extracts blocks wherein the pixel values of the input images do not tally in all the rows or all the columns within the block, and extracts blocks of decoded images corresponding to the blocks which have been extracted wherein the pixel values of the decoded images tally in all the rows or all the columns within the block.
22. (Previously Presented) An image encoding device according to Claim 20, wherein the means of extracting characteristic blocks extracts blocks wherein the pixel values of the input images do not all tally, and extracts blocks of decoded images corresponding to the blocks which have been extracted wherein all the pixel values of the decoded images tally.
23. (Previously Presented) An image encoding device according to Claim 20, wherein the means of extracting characteristic blocks further comprises a means of classifying and extracting characteristic blocks which classifies and extracts characteristic blocks, and of extracting pixels within the characteristic blocks.

24. (Previously Presented) The image encoding device according to Claim 23, wherein the means of classifying and extracting characteristic blocks classifies the blocks in accordance with the properties of the blocks of the decoded image.
25. (Previously Presented) The image encoding device according to Claim 23, wherein an evaluation criterion is set based on the activity of the pixel values for each of the blocks classified by the means of classifying and extracting the characteristic blocks.
26. (Previously Presented) An image encoding device according to Claim 20, wherein the means of classifying and extracting characteristic blocks extracts blocks of decoded images having first classified them into perfect flat blocks wherein all the pixel values tally, blocks other than perfect flat blocks wherein the pixel values in all the rows or on all the columns tally, and other blocks.
27. (Previously Presented) The image encoding device according to Claim 23, wherein the means of calculating characteristic distortion calculates the magnitude of distortion for each of classification of the blocks classified by the means of characteristic pixel extraction.
28. (Previously Presented) The image encoding device according to Claim 27, wherein the means of parameter value control calculates the extent of data compression by setting a threshold value of the magnitude of distortion for each of the classifications.

29. (Previously Presented) An image encoding device as in Claim 20, wherein the means of calculating characteristic distortion calculates block by block the dispersion of differences between the input image and pixels corresponding to the characteristic pixels of the decoded image, taking the maximum value for each classification classified by the means of classifying and extracting characteristic blocks as the characteristic distortion for each classification, while the means of controlling parameter values decides the degree of data compression by determining threshold values for the degree of characteristic distortion for each classification.

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36. (Canceled, without prejudice)

37. (Canceled, without prejudice)

38. (Previously Presented) An image encoding device comprising:

means of image encoding which encodes input images in accordance with an irreversible compression method,

means of image decoding which decodes encoded data created by the means of image encoding,

means of calculating characteristic distortion which calculates characteristic distortion by comparing the decoded image and the input image by small region units,

means of dividing regions which divides regions by small region units in accordance with the degree of characteristic distortion, creating region-divided images with region-divided information,

means of creating region images which utilizes input and region-divided images to create region images,

means of encoding region-divided images which encodes region-divided images in accordance with an irreversible compression method and creates region-divided image encoded data,

means of encoding first-region images which encodes in accordance with an irreversible compression method the image of a stipulated region divided by the means of dividing regions,

means of encoding second-region images which encodes images of other regions with the required picture quality, and

means of combining encoded data which combines region-divided image encoded data and encoded data for each region into a single set of encoded data.

39. (Canceled, without prejudice)

40. (Canceled, without prejudice)

41. (Currently Amended) The image encoding device according to claim 38 or claim 39, wherein the means of calculating characteristic distortion calculates the differences between corresponding individual pixels in the extracted small regions extracted from the input image and the decoded image, together with the sum of the differences between those differences and their average, wherein the sum is considered the magnitude of characteristic distortion.

42. (Canceled, without prejudice)

43. (Previously Presented) An image encoding method comprising:
encoding images in accordance with an irreversible compression method capable of processing input images in small region units;
decoding encoded data created with the means of encoding,
extracting characteristic pixels by utilizing input images and decoded images obtained by the means of image decoding,
calculating characteristic distortion of the decoded images in relation to the input images by utilizing characteristic pixels; and
controlling parameter values determining the extent of data compression in the image encoding step in accordance with the characteristic distortion.

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Please add the following New Claim:

58. (New) An image encoding method comprising the following steps:

- an image encoding step which encodes images in accordance with an irreversible compression method capable of processing input images in small region units,
- an image decoding step which decodes encoded data created during said encoding step,
- a characteristic pixel extraction step which utilizes input images and decoded images obtained by means of image decoding to extract characteristic pixels,
- a calculating characteristic distortion step which utilizes characteristic pixels to calculate characteristic distortion of the decoded images in relation to the input images, and
- a parameter value control step which controls parameter values determining the extent of data compression achieved during the image encoding step in accordance with the magnitude of characteristic distortion.